

YOUR HOSPITAL

2010–2011 ANNUAL REPORT

Michigan Department of Community Health

*Surveillance for Healthcare-Associated & Resistant
Pathogens (SHARP) Unit*

October 1, 2010–September 30, 2011

Data Access Date: February 14, 2012

Facility-Specific Annual Summary of Data Received by the Michigan Department of Community Health through the National Healthcare Safety Network (NHSN)

October 2010–September 2011

The Michigan Department of Community Health (MDCH) Surveillance for Healthcare-Associated & Resistant Pathogens (SHARP) 2010–2011 Annual Report of Michigan healthcare-associated infection (HAI) surveillance and prevention activities has been published at www.michigan.gov/hai. The report contains de-identified, aggregated counts and rates collected through the Centers for Disease Control and Prevention's (CDC's) National Healthcare Safety Network (NHSN) and shared with MDCH SHARP in order to facilitate statewide trend monitoring.

We sincerely appreciate your facility's dedication to data collection and your efforts to share this data with us. Your hospital's data contributed to the results in the SHARP Annual Report, as well as our understanding of infections at a statewide level. In addition to the aggregate report, we'd like to provide you with your facility-specific rates. We hope that this provides valuable feedback for your facility and allows you to make comparisons with state and national level data, where available. The data contained in this report were created specifically for you and are intended for your use only; it will not be shared with nor distributed to others, as stated in our data use agreement with your hospital.

Date Signed Data Use Agreement: 1/1/2010

Facility Data included in the Michigan 2010-2011 Annual Report: ☒

Date Range Included for Analysis: 10/1/2010 through 9/30/2011

Annual Survey Completed: 2010 ☐ 2011 ☒

Share Data with MHA Keystone: ☒

Share Data with the Vermont Oxford Network (VON): ☐

Modules in Reporting Plan for at least one month for the inclusive time period as of March 1, 2012¹:

Device-Associated Module:

CAUTI: ☒

CLABSI: ☒

VAP: ☒

MDRO/CDI Module:

MRSA LabID: ☒

CDI LabID: ☒

Procedure-Associated Module:

SSI: ☒

PPP: ☐

MRSA Surveillance: ☒

CDI Surveillance: ☒

¹ March 1, 2012 was the reporting plan observation date

MSSA Surveillance: ☐

VRE Surveillance: ☐

CephKleb Surveillance: ☐

Acine Surveillance: ☐

CRE Surveillance: ☐

Device-Associated Module:

Infection Rates								
Location	Infection Type	Infections	Number of Device Days	Rate per 1,000 device days	MI Rate per 1, 000 device days	NHSN Rate per 1,000 device days	Incidence Density p-value ¹	Incidence Density Percentile ²
OVERALL	CAUTI ³	14	16,348	0.85	1.04	1.56	0.0345	----
	CLABSI ⁴	8	14,985	0.54	0.72	1.30	0.0025	----
	VAP ⁵	8	9,278	0.90	0.79	1.21	0.0458	----
ICU	CAUTI	5	6835	0.73	1.04	1.03	0.0358	34
	CLABSI	3	8456	0.35	0.72	0.94	0.0465	15
	VAP	4	3465	1.15	0.79	0.84	0.5468	94
PICU	CAUTI	9	9513	0.95	1.04	1.86	0.0678	76
	CLABSI	5	6529	0.77	0.72	1.57	0.0035	46
	VAP	4	5813	0.69	0.79	1.73	0.0024	22

☐ Rate per 1,000 Device Days: Your facility's rate during the time period under review. Rate is calculated as the number of infections per 1,000 device days.

■ MI Rate: Overall Michigan rate calculated from all NHSN data shared with MDCH SHARP during the time period under review. Rate is calculated as the number of infections per 1,000 device days. Please reference the annual report to find more information as well as to see the rates stratified by variables of interest, such as unit type.

■ NHSN Rate: National rate calculated by the NHSN for similar units during the time period under review. Rate is calculated as the number of infections per 1,000 device days.

Highlight: Indicates statistically significantly better than the national rate

Highlight: Indicates statistically significantly worse than the national rate

¹Incidence density p-value: the p-value for the infection rate at your facility compared to the national NHSN rate. P-values that are 0.05 or less are considered to be statistically significantly different than the national rate, and can be in either direction, higher or lower.

²Incidence density percentile: the percentile of your facility compared to all other hospitals nationwide. A percentile of 80 can be interpreted as 80% of hospitals having a lower infection rate. Thus, 20% of hospitals across the nation have a higher rate of infection. A low percentile is desirable.


³CAUTI: Catheter-associated urinary tract infection


⁴CLABSI: Central line-associated blood stream infection


⁵VAP: Ventilator-associated pneumonia


Device Utilization Ratios


Location	Device Type	Number of Patient Days	Number of Device Days	Device Utilization Ratio	MI Ratio	NHSN Ratio	Proportion p-value ¹	Proportion Percentile ²
OVERALL	Urinary Catheter	21,664	16,348	0.75	0.29	0.52	----	----
	Central Line	27,341	14,985	0.55	0.34	0.47	----	----
	Ventilator	35,460	9,278	0.26	0.30	0.29	----	----
ICU	Urinary Catheter	8200	6835	0.83	0.29	0.34	0.2345	84
	Central Line	13,465	8456	0.63	0.34	0.58	0.5468	65
	Ventilator	15,695	3465	0.22	0.30	0.23	0.8468	23
PICU	Urinary Catheter	13,468	9513	0.71	0.29	0.67	0.2658	67
	Central Line	13,876	6529	0.47	0.34	0.29	0.0954	88
	Ventilator	19,765	5813	0.29	0.30	0.41	0.1354	32

 Device Utilization Ratio: A ratio comparing the number of device days to the number of patient days.

 MI Ratio: The Michigan Device Utilization ratio for the same time period.

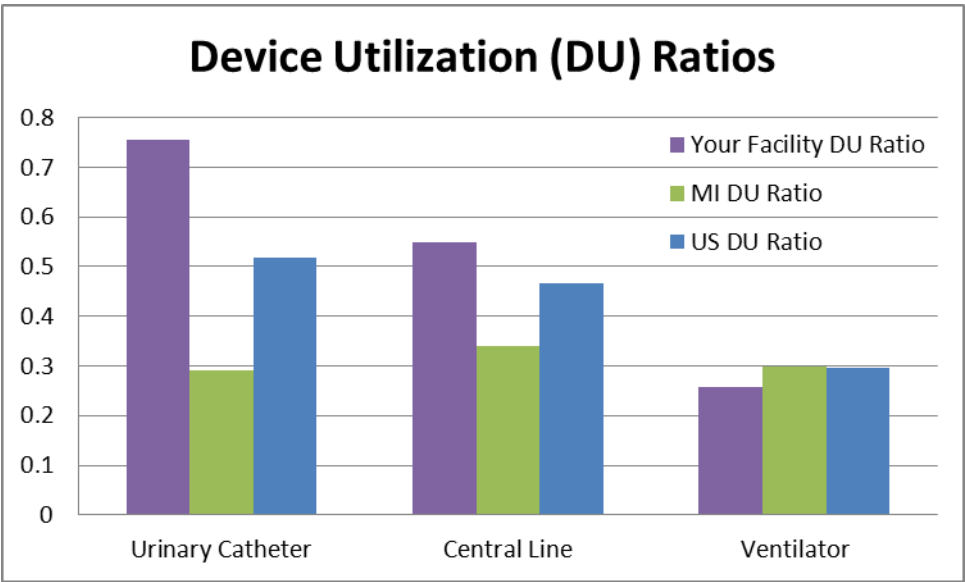
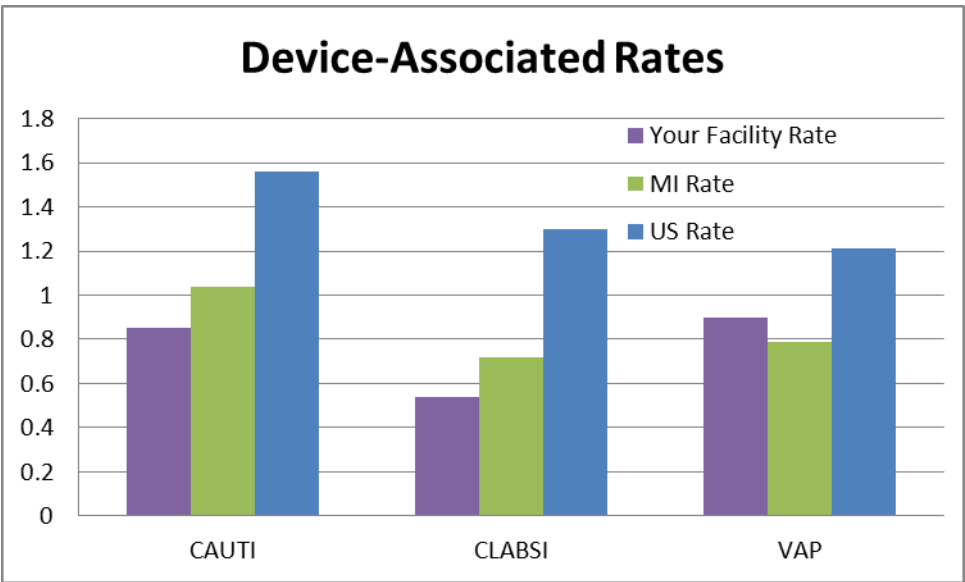
 NHSN Ratio: A national Device Utilization ratio for similar facilities and locations for the same time period.

 Highlight: Indicates statistically significantly better than the national ratio

 Highlight: Indicates statistically significantly worse than the national ratio

¹Incidence density p-value: the p-value for the infection rate at your facility compared to the national NHSN rate. P-values that are 0.05 or less are considered to be statistically significantly different than the national rate, and can be in either direction, higher or lower.

²Incidence density percentile: the percentile of your facility compared to all other hospitals nationwide. A percentile of 80 can be interpreted as 80% of hospitals having a lower infection rate. Thus, 20% of hospitals across the nation would have a higher rate of infection, while 80% would have a lower rate of infection than your facility. A low percentile is desirable.



Procedure-Associated Module:

Surgical Site Infections (SSI)							
Procedure Type	Procedures Done	Number of Infections ¹	Number of Predicted Infections	SSI Rate by Procedure (per 100)	SIR ²	SIR-Associated p-value ³	SIR-Associated Confidence Interval ⁴
OVERALL	750	4	5.200	0.53	0.8	0.4800	0.20, 1.40
HPRO ⁵	300	2	1.200	0.67	1.7	0.2600	0.8, 2.5
KPRO ⁶	450	2	3.800	0.44	0.7	0.6600	0.2, 1.5

☐ Number of Predicted Infections: Calculated by the NHSN from national data for similar procedures. This is the number of infections your unit would expect based on the number and type of procedures being performed if you operated at the national infection rate.
☐ Your facility's rates and associated statistics during the time period under review.


Highlight: Indicates statistically significantly better than expected
Highlight: Indicates statistically significantly worse than expected


¹Number of Infections: includes only SSIs secondary to procedures for which aggregate data are available. Counted infections exclude 'Superficial Incisional Secondary (SIS)' and 'Deep Incisional Secondary (DIS)' SSIs.
²SIR: Standardized infection ratio. Compares the number of infections your facility had to the number of predicted infections. An SIR of 1 means that there were the same number of infections as predicted from the national rate. An SIR of less than 1 means the facility had fewer infections than predicted. For example an SIR of 0.5 means that the facility had 50% fewer infections than would be predicted based on procedures. Similarly, an SIR greater than 1 is an elevated number of infections at the facility. For example, an SIR of 1.25 may be interpreted as 25% more infections than were predicted.
³SIR-Associated p-value: Probability of the SIR being attributable to chance. If equal to or less than 0.05, the result is considered statistically significant.
⁴SIR-Associated Confidence Interval: Lower bound of 95% Confidence Interval is only calculated if the number of all infections > zero. SIR values only calculated if number of predicted infections >= 1.
⁵HPRO: Hip Prosthesis
⁶KPRO: Knee Prosthesis

Multidrug-Resistant Organism Module:

Methicillin-resistant *Staphylococcus aureus* (MRSA) Infection Rates

Location	Infection	Number of Events	Number of Patient Days	Number of Patient Admissions	Rate ¹	Prevalence Rate ²	MI Rate
OVERALL	MRSA LabID	14	12500	800	1.1	1.8	4.38
	MRSA Surveillance	1	1250	----	0.8	----	0.25
ICU	MRSA LabID	4	2500	300	1.6	1.3	4.38
	MRSA Surveillance	1	250	----	2.0	----	0.25
Ward	MRSA LabID	10	10000	500	1.0	2.0	4.38
	MRSA Surveillance	0	1000	----	0.0	----	0.25

 Your facility's rate during the time period under review.


 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information, as well as to see the rates stratified by variables such as unit type.


¹MRSA LabID Rate: Is the rate of LabID Events per 1,000 patient days. Calculated by taking the number of LabID events divided by the number of patient days, multiplied by 1,000.

²MRSA Prevalence Rate: The proportion of patients with LabID events per 100 patients admitted. Calculated by taking the number of LabID events divided by the number of patients admitted, multiplied by 100.

Clostridium difficile (CDI) Infection Rates

Location	Infection	Number of Events	Number of Patient Days	Number of Patient Admissions	Rate ¹	Prevalence Rate ²	MI Rate
OVERALL	CDI LabID	20	9054	2700	22.1	0.7	15.55
	CDI Surveillance	7	3222	----	2.2	----	2.48
ICU	CDI LabID	13	5454	1500	23.8	0.9	15.55
	CDI Surveillance	2	1000	----	2.0	----	2.48
Ward	CDI LabID	7	3600	1200	19.3	0.6	15.55
	CDI Surveillance	5	2222	----	2.3	----	2.48

 Your facility's rate during the time period under review.

 Overall MI rate was calculated from all NHSN reports shared with MDCH during the time period. Please reference the annual report to find more information, as well as to see the rates stratified by variables such as unit type.

¹CDI LabID Rate: Is the rate of LabID Events per 10,000 patient days. Calculated by taking the number of LabID events divided by the number of patient days, multiplied by 10,000.

²CDI Prevalence Rate: The proportion of patients with LabID events per 100 patients admitted. Calculated by taking the number of LabID events divided by the number of patients admitted, multiplied by 100.

Discussion

Please refer to the attached interpretation sheet for assistance in interpreting your data.

Best wishes in your continued efforts towards eliminating healthcare-associated infections! If there is anything which would be helpful for you to receive in future facility-specific reports, please let MDCH SHARP know. Thank you for your continued support of our surveillance activities!

The SHARP Unit